

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A ~~clean room ceiling~~ light fixture, for a clean room ceiling formed by a plurality of frame members arranged in an H-Bar configuration, the light fixture comprising:
 - (a) a sealed ~~housing~~ module sized and shaped for removably replaceable engagement within the ceiling frame members, the module having a downwardly-directed light emitting aperture;
 - (b) a heat sink fixed within the module and spaced from an internal wall of ~~said housing the module~~ to define a cable raceway between ~~said the~~ heat sink and ~~said housing the internal wall~~;
 - (c) a plurality of light-emitting diodes mounted within ~~said housing the module~~ on ~~said the~~ heat sink, each one of ~~said the~~ light-emitting diodes having a lens for directing light emitted by ~~said the~~ one of ~~said the~~ light-emitting diodes through ~~said the~~ aperture into ~~said the~~ clean room; and,
 - (d) a power supply for applying drive current to ~~said the~~ light-emitting diodes.
2. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, each one of ~~said the~~ light-emitting diodes further having a reflector for directing light emitted by ~~said the~~ one of ~~said the~~ light-emitting diodes through ~~said the~~ aperture into ~~said the~~ clean room.
3. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, further comprising an anti-reflective coating on each one of ~~said the~~ lenses.
4. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 2, further comprising an anti-reflective coating on each one of ~~said the~~ reflectors.
5. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 2, wherein ~~said the~~ reflectors are formed of a high refractive index material.
6. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 5, wherein ~~said the~~ high refractive index material is polycarbonate.

7. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 2, further comprising, for each one of ~~said the~~ lenses and an adjacent one of ~~said the~~ reflectors, a refractive index matching compound applied between ~~said the~~ one of ~~said the~~ lenses and ~~said the~~ adjacent one of ~~said the~~ reflectors.
8. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 6 ~~7~~, wherein ~~said the~~ refractive index matching compound is an elastomer.
9. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 2, wherein ~~said the~~ reflectors are formed of a spectrally selective filter material.
10. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 5 ~~9~~, wherein ~~said the~~ spectrally selective filter material is a deep dyed polyester.
11. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 5 ~~9~~, wherein ~~said the~~ spectrally selective filter material is a spectrally selective thin film filter material.
12. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, further comprising, a holographic diffusion lens for uniformly distributing, through ~~said the~~ aperture, ~~said the~~ light emitted by ~~said the~~ light-emitting diodes.
13. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 12, wherein ~~said the~~ holographic diffusion lens further comprises a structured surface prismatic film.
14. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, further comprising, a variable transmissivity filter for uniformly distributing, through ~~said the~~ aperture, ~~said the~~ light emitted by ~~said the~~ light-emitting diodes.
15. (Cancelled)
16. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, wherein ~~said housing the module~~ is removably magnetically attachable to ~~said the clean room ceiling frame members~~.

17. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, wherein ~~said housing the module~~ is removably adhesively attachable to ~~said the clean room ceiling frame members~~.
18. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, wherein ~~said the~~ power supply further comprises an uninterruptible power supply.
19. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, wherein ~~said the~~ power supply further comprises an in-line DC-DC converter coupled between a high voltage DC power supply and ~~said the~~ fixture.
20. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 18, wherein ~~said the~~ power supply further comprises an in-line DC-DC converter coupled between ~~said the~~ uninterruptible power supply and ~~said the~~ fixture.
21. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 18, wherein ~~said the~~ uninterruptible power supply is located at a remote ~~distance location~~ from ~~said the~~ fixture.
22. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 20, wherein ~~said the~~ uninterruptible power supply is located at a remote ~~distance location~~ from ~~said the~~ fixture.
23. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 19, wherein ~~said the~~ DC-DC in-line converter is located closely proximate to ~~said the~~ fixture.
24. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 20, wherein ~~said the~~ DC-DC in-line converter is located closely proximate to ~~said the~~ fixture.
25. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 22, wherein ~~said the~~ DC-DC in-line converter is located closely proximate to ~~said the~~ fixture.

26. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, wherein ~~said the~~ power supply further comprises a regulator for regulating ~~said the~~ drive current as a function of time.
27. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 26, further comprising a light sensor located in ~~said the~~ clean room and electrically connected to ~~said the~~ regulator, ~~said the~~ light sensor producing an output signal representative of light intensity near ~~said the~~ light sensor, and wherein ~~said the~~ regulator further regulates ~~said the~~ drive current as a function of ~~said the~~ output signal.
28. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 26, further comprising a light sensor located in ~~said the~~ clean room and electrically connected to ~~said the~~ regulator, ~~said the~~ light sensor producing an output signal having a magnitude representative of light intensity near ~~said the~~ light sensor, and wherein ~~said the~~ regulator further regulates ~~said the~~ drive current in inverse proportion to ~~said the~~ output signal magnitude.
29. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, further comprising a programmable controller electrically connected between ~~said the~~ power supply and ~~said the~~ light-emitting diodes, ~~said the~~ programmable controller for programmatically regulating ~~said the~~ drive current as a function of time.
30. (Currently Amended) A ~~clean room ceiling~~ light fixture as defined in claim 1, further comprising a programmable controller electrically connected between ~~said the~~ power supply and ~~said the~~ light-emitting diodes, ~~said the~~ programmable controller for programmatically regulating ~~said the~~ drive current as a function of time to maintain substantially constant light flux output of ~~said the~~ light-emitting diodes.